

CLAIMS:

1. (Currently Amended) A method of providing a biologically active moiety by administering Sertoli cells to a patient in need of such treatment that are naturally immune privileged and that have been isolated and genetically modified in a laboratory apparatus so as to express said biologically active moiety such that said cells express said biologically active moiety in a pharmacologically effective ~~amounts~~ amount *in vivo*.

Claims 2-6 (canceled)

7. (Currently Amended) The method of claim 1, where said genetic modification is a nonviral physical method selected from the group ~~including but not limited to~~ consisting of microinjection, electroporation, lipofectin, chemically-mediated transfection with calcium phosphate, and liposomes.

8. (Currently Amended) The method of claim 1, wherein said genetic modification uses ~~one or more~~ at least one ~~viral vectors~~ vector selected from the group ~~including but not limited to~~ consisting of retroviral vectors, adenoviral vectors, and adeno-associated viral vectors.

9. (Original) The method of claim 1, wherein said administration is selected from the group of methods consisting of intravenous, intramuscular, intraperitoneal, and subcutaneous injection and infusions.

10. (Original) The method of claim 1, wherein said cells are administered by surgical implantation.

11. (Original) The method of claim 1, wherein said cells are administered to the central nervous system.

12. (Currently Amended) A composition comprising Sertoli cells that are naturally immune privileged and that have been isolated and genetically modified in a laboratory apparatus to express ~~said~~ a biologically active moiety such that said cells express said biologically active moiety in a pharmacologically effective ~~amounts~~ amount *in vivo*.

13. (Currently Amended) The composition of claim 12, wherein said biologically active moiety is not ~~naturally~~ endogenously expressed by said cells.

Claim 14 (Canceled)

15. (Currently Amended) The composition of claim 12, wherein said ~~immune-privileged Sertoli cells or tissues~~ are non-human Sertoli cells ~~or tissues~~.

16. (Currently Amended) The composition of claim 12, wherein said ~~immune-privileged Sertoli cells or tissues~~ are human cells ~~or tissues~~.

17. (Currently Amended) The composition of claim 12, wherein said ~~immune-privileged Sertoli cells or tissues~~ are primary cells.

18. (Currently Amended) The composition of claim 12, wherein said ~~immune-privileged Sertoli cells or tissues~~ are immortalized cells.

Claim 19 (cancelled)

20. (Currently Amended) The composition of claim 12, wherein said ~~immune-privileged Sertoli cells or tissues~~ have been passaged ~~one or more times~~ at least once.

21. (Currently Amended) The composition of claim 12 wherein said ~~immune-privileged Sertoli cells~~ are obtained from the group consisting of a transgenic non-human animal and the descendent of ~~the~~ said transgenic non-human animal, who has had DNA introduced at an embryonic state such that said ~~immune-privileged Sertoli cells~~ express a biologically active moiety in a pharmacologically effective ~~amounts~~ amount.

22. (Currently Amended) The ~~method~~ composition of claim 12, wherein said ~~immune-privileged Sertoli cells~~ are adherent to a biologically inert material.

23. (Currently Amended) The composition of claim 12, wherein said biologically active moiety is selected from the group ~~including but not limited to~~ consisting of insulin, clotting factors II, VII, VIII, IX, X, vasopressin, adenosine deaminase, glucocerebrosidase, human growth hormone, erythropoietin, clacitonin, leptin, interferon alpha, interferon beta, granulocyte colony-stimulating factor, granulocyte macrophage colony stimulating factor, gangliosides, interleukins, cytokines, and antibodies.

24. (Currently Amended) The composition of claim 12, wherein said biologically active moiety is selected from a group of molecules therapeutic for

neurological diseases and conditions, ~~including but not limited to~~ consisting of neurotrophins, neurotrophic factors, proteins that stimulate axonal growth, and neurotransmitters.